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THE PROBABLE ORIGIN AND DIFFUSION OF NORTH AMERICAN SPECIES OF THE GENUS DIABROTICA.—II.

BY F. M. WEBSTER.

Since the publication of my paper in No. 4, Vol. III, of the JOURNAL, a considerable amount of information relative to the subject has since either been communicated to me, or placed at my disposal where I did not before feel at liberty to use in print. I have, therefore, thought best to add this supplementary note, including in it a few corrections.

Professor Cockerell has very kindly prepared the following table illustrating the position of his *D. vittata* var. *incerta*, Ckll. found by him from Mesilla Valley southward to Juarez, Mexico, opposite El Paso, Texas, on the Rio Grande:

- A. Antennæ with the three basal joint pale.
- a. " Legs yellow, the knees, anterior tibiæ and tarsi, and the tips of the middle and posterior tibiæ and their tarsi, piceous." (Horn). **vittata** Fab.
 - b. Legs more or less darkened, but basal third of anterior femora, and basal two-thirds of middle and posterior femora, and hind tibiæ more or less in middle, yellow. **vittata** var. **incerta** Ckll.
- B. Antennæ all black. Legs all black except bases of femora. **trivittata** Mann.

In regard to the distribution of these in the valley of the Rio Grande, Prof. Cockerell gives me the following table:

7,000 ft.	{	Santa Fé, <i>D. 12-punctata</i> , (1 specimen not taken by himself).
	{	Gallinas Cañon, <i>D. atripennis</i> , (reported by the Snow party).
*5,000 "	{	Albuquerque, <i>D. longicornis</i> .
*5,000 "	{	Socorro, <i>D. 12-punctata</i> , . . . <i>D. lemniscata</i> . Collected by Prof.
3,000 "	{	Mesilla Valley, Wickham, at Albuquerque.
	{	<i>D. trilineata</i> .
*3,— "	{	Juarez, Mexico, <i>D. vittata</i> var. <i>incerta</i> .

The occurrence at Gallinas Cañon should have been credited to Prof. Snow and not to Prof. Cockerell. Prof. Wickham calls my attention to the fact of Dr. Horn's having observed a close resemblance between *Andrector 6-punctata* Horn, and *Diabrotica 12-punctata* Oliv., while he had himself confused a second species of *Andrector* with *Diabrotica trilineata* Say, and placed them in his collection as all be-

* These records of elevations are supplied by myself and taken from surveys made by the U. S. Geological Survey and published in 1890. The elevation of Juarez, Mex., opposite El Paso, Tex., is but little less than 3,800 ft.

longing to the latter species. *Andrector* is placed in the same sub-tribe as *Cerotoma* and *Diabrotica*, which would rather oppose the idea of a protective mimicry, though by no means disproving it. We simply need more information in regard to the matter as all may be alike inedible.

Since my paper was published, I have found the larvæ of *Diabrotica vittata* so excessively abundant in some greenhouses near Cincinnati, as to entirely ruin the cucumber vines being grown therein. The date of my observations was December 28, and at that time I found adults, and larvæ from one-half to two-thirds grown, but mostly the former.

ON THE PROBABLE ORIGIN OF THE PERICOPIDÆ: *COMPOSIA FIDELISSIMA* H.-S.

By HARRISON G. DYAR, A. M., Ph.D.

The Pericopidæ are a tropical American family of moths with the venation of Noctuidæ, most allied in their colors, perhaps, to the Diop-tidæ. Three genera occur in our fauna, *Gnophæla*, *Composia* and *Daritis*.

In placing the North American families in systematic position on their larval characters, I was able to show from the writings of Bruce and Cockerell that the abdominal tubercles of *Gnophæla* were the same as in the Arctiidæ; but was unable to get further in the absence of material and the unfortunate brevity of the published descriptions. Now, however, I have obtained many larvæ of *Composia*, and have been able to rear them by the kind assistance of Mr. F. Kinzel. They were found on the vines of *Echites umbellata* (determined by Mr. Kinzel) at Palm Beach, Florida, during the Christmas holidays. *Composia* is a moderately specialized Pericopid type, and its larvæ may be supposed to be characteristic of the family. The following are the larval characters:

Warts many haired, simple, not tufted, the arrangement as in the Arctiidæ, but with a distinct tendency to the coalescence of the two upper warts on the meso- and post-thoracic segments. Primitive first stage present, wart formation not highly specialized, head setæ very simple, no secondary hair formation. Body long, cylindrical, Noctuidous rather than Arctiiform, joint 12 slightly enlarged.